Glossary

base infiltration	Infiltration that remains at relatively steady levels over weeks and months.
base flow	Wastewater flow (not including inflow and infiltration) originating from residential, commercial, and industrial sources.
basin	A geographic area that contributes flow to a specific location, usually a flow meter or a facility. The two primary types of basins used in the assessment are model basins and mini-basins.
benefit/cost ratio	The cost of the regional conveyance system improvement (CSI) project divided by the cost of the proposed I/I reduction project.
CALAMAR	A technology that uses radar images from the National Weather Service NEXRAD radar and rain gauge data for calculating rainfall intensities.
combined sewers	A conveyance system designed to carry both wastewater and stormwater.
control basin	A drainage basin similar to a pilot basin where no work was performed; it was used to compare the impact of change in the pilot basin as a result of rehabilitation.
conveyance system	A system consisting of trunks, interceptors, force mains, pump stations and other facilities that moves wastewater from one place to another.
cured-in-place material	A material that is used to rehabilitate existing pipe by forming a lining within it. During the pilot projects, a resin-saturated fabric was used to rehabilitate some components of the sewer system.
direct disconnect	Direct disconnects occur when "illicit" connections to the sewer system (that is, pipes carrying something other than sewage) are disconnected and routed to alternative disposal systems such as a ditch or storm sewer.
drainage basin	Area that is drained by a river and its tributaries.
dry weather flow	The non-storm related wastewater flow between May and October. Composed of the base flow and infiltration/inflow (I/I).
Earth Tech Team	A collection of firms led by Earth Tech that are providing consulting services to King County on the Regional I/I Control Program. The firms include KCM Tetra Tech, HDR Engineering, Cosmopolitan Engineering Group, Rosewater Engineering, ADS Environmental Services, Financial Consulting Solutions Group, Shannon and Wilson, and Triangle Associates.

fast response to rainfall	The water that quickly enters a wastewater conveyance system in response to rainfall. Typically this may be from pipe connections from storm sewers or combined sewers, catch basins, downspouts, and/or other surface runoff.
flow meter	A gauge that shows the rate of flow or volume of a fluid. In wastewater treatment, flow meters measure how many million gallons of wastewater move through the system per day.
geographic information system (GIS)	A system of computer software, hardware, data, and personnel that helps manipulate, analyze, and present information tied to a spatial (usually a geographic) location.
groundwater	Water that infiltrates into the earth and is stored in the soil and rock within the zone of saturation below the earth's surface. Groundwater is created by rain, which soaks into the ground and flows down until it is collected at a point where the ground is not permeable. Groundwater then usually flows laterally toward a river, lake, or ocean. It is often used for supplying wells and springs.
host pipe	The existing sewer main or side sewer pipe inside which a liner is installed or within which a pipe bursting head is dragged.
hydraulic model	A model of the actual pipes that convey the wastewater flows and I/I generated by the hydrologic model. The hydraulic model outputs flow depths and velocities within specific pipe segments and allows evaluation of how the system performs under existing and future demands.
hydrograph	Graphs of flow versus time. Hydrographs were outputs of the hydrologic model and were used as inputs for the hydraulic model.
hydrologic model	A model used to numerically simulate the physical process of how rainfall ends up as inflow and infiltration.
I/I reduction technique	A means of decreasing I/I by replacing or rehabilitating selected components of the sewer system (for example, replacing public sewers and direct disconnects).
I/I rehabilitation method	The technology used to repair sewer system components (for example, dig and replace, pipe bursting, slip lining).
impervious surface	Any impenetrable material that prevents infiltration of water into the soil. Examples include rooftops, roads, parking lots, sidewalks, patios, bedrock outcrops, and compacted soil.
infiltration	Groundwater that seeps into sewers through holes, breaks, joint failures, defective connections, and other openings.
inflow	Stormwater that rapidly flows into sewers via roof and foundation drains, catch basins, downspouts, manhole covers, and other sources.
lateral	The portion of the sewer service pipe on public right-of-way. Where the sewer service pipe is on private property, it is called a side sewer. See also “side sewer”.

local agencies	Water and sewer districts that receive wholesale wastewater services from King County.
manhole	A vertical shaft covered by a lid at ground level that provides access for maintenance of an underground pipe.
Metropolitan Water Pollution Abatement Advisory Committee (MWPAAC)	This committee was created by state law and consists of representatives from the cities and sewer districts that operate sewer systems in King County. Most of these cities and sewer districts deliver their sewage to the County's system for treatment and disposal. MWPAAC advises the King County Council and Executive on matters related to water pollution abatement.
mini-basins	Drainage basins that were defined to provide manageable target areas for sewer system evaluation and rehabilitation. Mini-basins contained an average of 22,000 linear feet of sewer lines.
model basin	A geographic area defined to facilitate modeling of I/I and sewage flows. Model basins represented the entire sewered area flowing to a specific flow meter location, and consisted of an average of 1,000 sewered acres and 100,000 linear feet of pipe. Each model basin encompassed an average of 5 to 7 mini-basins.
model calibration	The process of adjusting model parameters so the model output matches the measured sewer flow for the same time period.
MOUSE	A software package (Modeling of Urban Sewers) from the Danish Hydraulic Institute. It is used to create hydrologic and hydraulic models.
open cut	A method of installing pipe near the surface, also called "trenching." The open-cut method consists of digging a trench and stockpiling excavated materials, installing pipe in the trench, backfilling the trench, and restoring the surface.
peak flow	The highest base flow and infiltration/inflow expected to enter a wastewater system during wet weather at a given frequency. The wastewater treatment plant is designed to accommodate peak flow.
pilot basin	That portion of a mini-basin where rehabilitation work was actually performed for the pilot projects.
pilot projects	Demonstration sewer rehabilitation projects that were conducted to gain a better understanding of the benefits and costs associated with I/I reduction projects.
pipe bursting	A rehabilitation method that involves replacing an existing pipe by pulling in a new pipe and simultaneously bursting the old pipe into fragments with a steel bursting head.
pump station	For wastewater purposes, a structure that houses pumps and other equipment for lifting wastewater in pipes to higher elevations so that it can continue to flow by gravity.

rapid infiltration	Infiltration into a wastewater conveyance system that is characterized by a rapid increase in flow during and/or shortly after a rainfall event, with gradual reduction in flow over a relatively short period after the event. This response is not as fast as inflow and is sustained longer than inflow.
Regional Wastewater Services Plan (RWSP)	A capital improvement program adopted by the King County Council in December 1999 to provide wastewater services to the County's service area through 2030.
return period	Average interval of the time or number of years between events of a given magnitude or larger (for example, peak flow).
sanitary sewer	A pipeline that carries household, industrial, and commercial wastewater.
separated sewer	A wastewater pipe designed to accept and transport household, industrial, and commercial wastewater and to exclude stormwater sources.
sewerable areas	Areas that are part of the future service area that will be served by a sanitary sewer system.
sewered areas	Areas served by a sanitary sewer collection system. These areas contribute to the I/I flows in the sewer system.
side sewer	The portion of the sewer service pipe on private property. Where the sewer service pipe is on public right-of-way, it is called a lateral. Also see "lateral."
slow infiltration	Infiltration into a wastewater conveyance system that is characterized by a slow increase in flow during a rainfall event. This increased flow may take several days or weeks to decline after a storm.
stormwater	The portion of precipitation that does not percolate into the ground or evaporate. Stormwater flows across the ground surface in channels or ditches, or flows within pipes.
TABULA	A planning level software tool developed by the County; the tool extends unit cost and applies construction cost indices.
travel time	The amount of time it takes flows to travel through the conveyance system.
trenchless construction	A technique that requires little or no trenching to construct the improvements.
unsewered areas	Areas that are not served by a sanitary sewer collection system (for example, large open spaces like parks). These areas do not contribute to the I/I flows in the sewer system.
wastewater	The water and wastes from homes and businesses that enter pipes and are transported to treatment plants for treatment and disposal.
wet weather flow	The flow between November 1 and April 30. Composed of the base flow and infiltration/inflow (I/I).